

REMARKS

Claims 1, 3-6 and 11 are pending in the above-identified application. Claims 8-9 have been cancelled, and claim 10 incorporated into claim 1.

Issues under 35 USC 103(a)

Claims 1, 3-6 and 8 have been rejected under 35 USC 103(a) as being unpatentable over Kodama '130 (USP 6,291,130) in view of Padmanaban '690 (USP 5,846,690).

Claims 1, 3-6 and 8-11 have been rejected under 35 USC 103(a) as being unpatentable over Kodama '130 in view of Kawauchi '233 (US 2002/0086233 A1) or Ishikawa '854 (USP 4,671,854).

The above-noted rejections are traversed based on the following reasons.

Removal of Rejection based on Kodama '130 and Padmanaban '690

Upon the incorporation of claim 10 into claim 1 the above-noted rejection based on Kodama '130 and Padmanaban '690 has been overcome. Note that claim 10 was not rejected on this basis. Therefore, it is requested that this rejection be withdrawn.

Present Invention and Its Advantages

The present invention is directed to a positive resist composition which includes, among other components, (A) a resin derived from monomers having an adamantane group, and (D) a polyvalent carboxylic acid ester selected from the group recited in present claim 1. As shown by the comparative test results presented in the present specification in Table 2, employment of the combination of components (A) and (D), along with the other components, results in advantageously improved effective sensitivity and resolution properties.

Distinctions over Kodama '130

Kodama '130 discloses a positive photosensitive composition which includes (A) a component which generates an acid upon irradiation with an actinic ray or radiation (B) a resin having a group which is decomposed by the action of an acid to increase solubility in an alkaline

developing solution, wherein the resin contains at least one structure represented by the formulae (I), (II) and (III) as noted at column 3-4, for example. Kodama '130 also mentions at column 84, lines 50-55 that the composition may further include, "...an acid decomposable dissolution accelerating compound, a dye, a plasticizer, a surface active agent, a photosensitizer, an organic basis compound, a compound which accelerates the solubility in a developing solution, and the like."

Kodama '130 fails to disclose or suggest any of the polyvalent carboxylic acid esters of component (D) employed in the composition of the present invention. As admitted in the Office Action of May 5, 2006, Kodama '130 merely provides a general suggestion that a "plasticizer" may be contained in the composition. However, the plasticizer may also not be present and there is no indication of what type of plasticizer can be used from among the many plasticizers that would have been available. Further, the general suggestion at column 84 of Kodama '130 mentions many other possible additives as alternatives to a plasticizer. Consequently, Kodama '130 clearly falls short of supporting a prima facie argument in favor of obviousness because an element from the present claims is absent, i.e. the polyvalent carboxylic acid ester (D).

Distinctions over Kawauchi '233 and Ishikawa '854

Kawauchi '233 discloses a photosensitive resin composition which must contain a fluoroine-containing polymer with a fluoro alipathic group, and an addition polymerizable monomer of formula (1a) or (2a), as noted at paragraphs [0069]-[0076] at pages 5-6 thereof. Kawauchi '233 further discloses at paragraph [0232] that various additives may be added to the described composition, including various plasticizer, such as dioctyl adipate.

Ishikawa '854 discloses a method for preparing a printed circuit board with solder plated circuit and through-holes, wherein the method may employ a photosensitive resin composition. Ishikawa '854 discloses at the bottom of column 3 that the resin composition may include, among other components, a chelating agent, plasticizer and aqueous medium. Ishikawa '854 discloses at column 4, lines 46-68 a variety of possible plasticizers, including for example dioctyl adipate.

Both Kawauchi '233 and Ishikawa '854 fail to disclose or suggest the composition of the present invention including the combination of a resin (A) derived from monomers having an adamantane group, and (D) a polyvalent carboxylic acid ester. Thus, significant patentable distinctions exist between the present invention and both of these references.

Absence of Basis to Combine Kodama '130 with Other References

In addition to the above it is submitted that inconsistent features among the Kodama '130, Kawauchi '233 and Ishikawa '854 references prevent these references from being combined together. Kodama '130 discloses compositions which do not contain a significant amount of fluorine-containing polymers which include a fluoro aliphatic group together with a polymerizable monomer of formula (1a) or (2a) as required by the composition of Kawauchi '233. The composition of Kodama '130 also do not appear to employ a chelating agent for the purpose of reacting with copper ions liberated during anionic electrodeposition as required by the compositions disclosed by Ishikawa '854. In addition both Kawauchi '233 and Ishikawa '854 fails to disclose or suggest any of the specific components (A) or (B) requiring a structure represented by formule (I), (II) and (III) as required by Kodama '130. The Office Action fails to resolve these significant inconsistent features such that Kodama '130 composition can not be modified by merely selecting a specific plastizer component from either of the Kawauchi '233 or Ishikawa '854 references. Note that the fact that references can be combined or modified fails to be sufficient to establish prima facie obviousness. *In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990). Further still, the comparative test results exhibited by the composition of the present invention and summarized in Table 2 of the present specification, as discussed above, rebut any alleged prima facie obviousness since the results represented evidence unexpected, advantageous properties not recognized by the cited references. Therefore, numerous and significant patentable distinctions exist between the present invention and the above-discussed references.

It is submitted for the reasons above that the present claims define patentable subject matter such that this application should now be placed in condition for allowance.

If any questions arise in the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By 
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